



FLIRT AKKU 2-CAR UNIT

Nahverkehrsverbund Schleswig-Holstein
GmbH (NAH.SH GmbH), Germany

The FLIRT Akku is the battery-operated version of the FLIRT series. The local transport authority in Schleswig-Holstein ordered 55 two-part FLIRT Akku units in July 2019 as part of an innovation partnership.

The battery-operated multiple units are being used on the Northern and Eastern networks since October 2023. Designed for non-electrified or partially-electrified routes, the FLIRT Akku is highly versatile. The batteries can be charged during operation via the catenary and also at electrified terminal stations. In addition, the braking energy can be stored in the batteries, allowing the vehicle to be used efficiently and in an energy-saving manner.

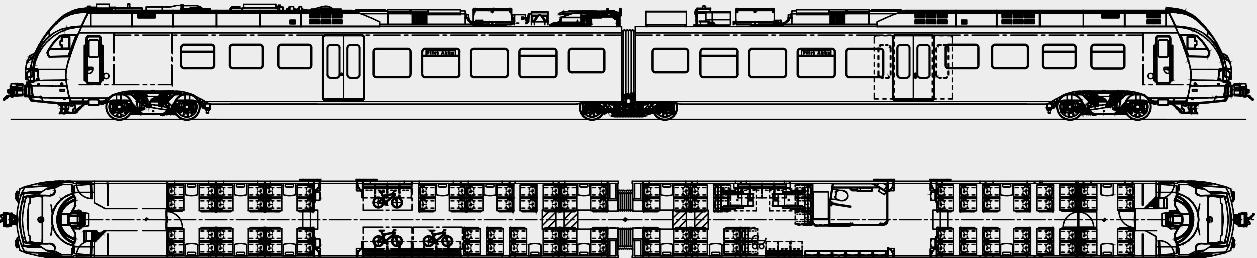
Reliable availability is also promised by the fact that the manufacturer will provide all maintenance and service work for at least 30 years. The vehicle, which is equipped with lithium-ion batteries, is being used as a two-car train unit in Schleswig-Holstein. The fully air-conditioned FLIRT Akku for the NAH.SH has bright passenger compartments equipped with passenger WLAN, and also spacious multi-purpose areas offering space for a total of 216 passengers, of which 123 can be seated.

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Technical features

Technology

- Automatic central buffer couplings
- Lightweight construction in aluminium
- Fulfils the requirements of DIN EN 15227 (Crash Norm)
- Air-suspension bogies ensure smooth running
- Catenary operation with 15 kV and catenary-free operation with lithium-ion traction battery
- Fast charging of the lithium-ion traction battery via 15 kV catenary

Comfort

- Light, friendly passenger compartments
- Air-conditioned passenger compartments and driver's cab
- Generously designed multifunctional compartments at all entrance areas
- 2 entry doors per side
- Automatic gap bridges on all doors
- Cycle/wheelchair spaces
- Modern passenger information system
- Universal WC pursuant to TSI PRM
- WLAN access

Staff

- Ergonomic driver workplace design

Reliability / Availability / Serviceability / Safety

- Fulfils the Crash Norm EN 15227
- Fulfils the TSI PRM (fully accessible for people with reduced mobility) and the TSI Noise
- Spare part delivery and technical maintenance for more than 30 years by the manufacturer

Vehicle data

Client	Nahverkehrsverbund Schleswig-Holstein GmbH (NAH.SH GmbH)	
Application area	Kiel–Lübeck–Lüneburg, Bad Oldesloe–Neumünster, Neumünster–Heide–Büsum, Kiel–Rendsburg–Husum, Husum–St. Peter Ording, Kiel–Eckernförde–Flensburg, Kiel–Schönberger Strand	
Track gauge	1,435 mm	
Designation	FLIRT Akku EMU 2	
Supply voltage	15 kV AC	
Axle arrangement	Bo'2'2'	
Number of vehicles	55	
Commissioning	October 2023	
Seats	105 + 18 flap seats	
Standing room (4 pers./m²)	123 (93 when flap seats occupied)	
Floor height	Low-floor	780 mm
	High-floor	1,145 mm
Entry width	1,300 mm	
Entry height	780 mm	
Length	45,700 mm	
Vehicle width	2,820 mm	
Vehicle height	4,275 mm	
Bogie wheelbase	Trailer bogie	2,700 mm
Drive wheel diameter	870 mm (new)	
Bogie wheel diameter	870 mm (new)	
Top speed	160 km/h	
Drive	2 x 500 kW	